

# 6060 Quiz 3

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## 1 Question 1

The correlation between agreeableness and conscientiousness is  $r = -.028$  and the relationship between extraversion and openness is  $r = -.018$ . The agreeableness-conscientiousness correlation is not meaningfully different than the extraversion-openness correlation,  $\Delta r = -.01$ , 95% CI $[-.11, .09]$ ,  $p = .85$ .

## 2 Question 2

The correlation between agreeableness and conscientiousness is  $r = -.03$  and the relationship between agreeableness and extraversion is  $r = .05$ . The agreeableness-conscientiousness correlation is not meaningfully different than the agreeableness-extraversion correlation  $\Delta r = -.08$ , 95% CI $[-.18, .024]$ ,  $p = .13$ .

## 3 Question 3

When looking at the correlation between agreeableness and extraversion for each gender specifically, the correlation for men is  $r = .043$  and the correlation for women is  $r = .025$ . However, the difference between men and women is not meaningfully different when examining the relationship between agreeableness and extraversion,  $\Delta r = .017$ , 95% CI $[-.13, .17]$ ,  $p = .82$ .

## 4 Question 4

The rating-raises correlation ( $r = .59$ ), is stronger than the rating-critical correlation ( $r = .16$ ),  $\Delta r = .43$ , 95% CI $[-.067, .79]$ ,  $p = .023$ .

## 5 Question 5

The rating-raises correlation ( $r = .59$ ), is stronger than the complaints-critical correlation ( $r = .19$ ),  $\Delta r = .4$ , 95% CI $[-.015, .78]$ ,  $p = .05$ .

## 6 Question 6

A study utilizing a sample of  $N = 3000$ , found a correlation between rating-raises ( $r = .03$ ) that was different than the correlation found by a study utilizing a smaller sample of  $N = 30$  ( $r = .59$ ),  $\Delta r = .56$ , 95% CI $[-.26, .76]$ . One can conclude that the two correlations between rating-raises differ across the two studies and did not come from the same population.

## 7 Question 7

The study with  $N=3000$  is larger and likely more informative than the sample with only  $N=30$ . When the sample size is larger, the confidence interval is more precise and is a better estimate of the true population value. As such, the plausible range of the true population correlation between rating and raises is between CI 95% [.26, .76]. Based on this information, one can conclude that there is likely a moderate, positive correlation between the ratings and raises variables. However, further studies are encouraged so a meta analysis can be done to make a more confident conclusion about the true relationship.